

ABSTRACT

A humidifying device (10), for humidifying a gas with the water vapor contained in air, comprises: a
5 hollow fiber bundle (14) formed by bundling a plurality of hollow fibers (14a) permeable by water vapor, the hollow fibers being orientated in a direction of a predetermined axis; a housing (12) having a space for accommodating the hollow fiber bundle (14), and having an introduction port (12a) for the gas to be humidified, communicating to bores of the hollow fibers, a discharging port (12b) for the gas to be humidified, communicating to the interior spaces of the hollow fibers, an air inlet (12c) communicating to a space in
10 the housing external of the hollow fibers, and an air exit (12d) communicating to the space in the housing external of the hollow fibers; and blowing means (16) arranged at the air inlet (12c) of the housing for introducing air into the housing, wherein a ratio between a sum of the cross-sectional areas of the hollow fibers taken along a plane perpendicular to the axis, and the cross-sectional area of an air passage, is set within a range from 0.1 to 0.7, the cross-sectional area of the air passage being obtained by subtracting the sum of the
15 cross-sectional areas of the hollow fibers from the cross-sectional area of the space of the housing (12) taken along a plane perpendicular to the axis.

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